

Apogean 10 GPU 4U Server with Dual Socket AMD EPYC 9004/9005 Processors

AD122U-E4-ARB10G



Key Features

- 4U Rackmount with 3+1, 80-PLUS Platinum, 2000W CRPS
- Dual Socket SP5 (LGA 6096), supports AMD EPYC™ 9005*/9004 (with AMD 3D V- Cache™ Technology) and 97x4 series processors
- 12+12 DIMM slots (1DPC), supports DDR5 RDIMM, RDIMM-3DS
- 16 hot-swap 2.5" NVMe (PCIe5.0 x4) drive bays or 24 Hot-swap 2.5" SATA/SAS drive bays *Additional RAID/HBA card required
- 10 FHFL dual-slot PCIe5.0 x16 + 2 FHFL single-slot PCIe5.0 x8 shared space with adjacent dual-slot (with PCIe Switch)
- 1 FHFL single-slot PCIe5.0 x16 (CPU direct link), 2 FHHL PCIe5.0 x16
- Supports 2 M.2 (PCIe3.0 x4 or SATA 6Gb/s)
- 1 OCP NIC 3.0 (PCIe5.0 x16), 2 RJ45 (1GbE) by Intel® i350
- Remote Management (IPMI)

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Specifications:

• Physical Status

Form Factor	4U Rackmount
Dimensions	786 x 438 x 176.5 mm (30.9" x 17.2" x 6.9")

• Processor System

CPU	Supports AMD EPYC™ 9005*/9004 (with AMD 3D V-Cache™ Technology) and 97x4 series processors *A BIOS update is required to support AMD EPYC™ 9005 series processors
Socket	Dual Socket SP5 (LGA 6096)
Thermal Design Power	Up to 400W
Chipset	System on Chip

• Memory

Supported DIMM Qty	12+12 DIMM slots (1DPC)
Supported Type	Supports DDR5 288-pin RDIMM, RDIMM-3DS
Max. Capacity per DIMM	RDIMM: 128GB (2Rx4) RDIMM-3DS: 512GB (2Rx4)
Max. DIMM Frequency	4800 MHz
Memory voltage	1.1V

• PCIe Expansion Slots

PCIe x16	Rear: 10 FHFL dual-slot PCIe5.0 x16 (with PCIe Switch) 1 FHFL single-slot PCIe5.0 x16 (CPU direct link) Front: 2 FHFL PCIe5.0 x16
PCIe x8	Rear: 2 FHFL single-slot PCIe5.0 x8, shared space with adjacent dual-slot (with PCIe Switch)

• Storage

Front Side Drive Bay	16 Hot-swap 2.5" NVMe (PCIe5.0 x4) drive bays or 24 Hot-swap 2.5" SATA/SAS* drive bays *Additional RAID/HBA card required to support the 24 x 2.5" SATA/SAS drive bays
Front Side Backplane	24-port NVMe/SATA/SAS* passive backplanes *SAS drive is only supported with additional RAID/HBA cards
Internal Side	1 M-key (PCIe3.0 x4 or SATA 6Gb/s), supports 22110/2280 form factor [CPU0] 1 M-key (PCIe3.0 x4 or SATA 6Gb/s), supports 22110/2280 form factor [CPU1]

• Ethernet

Additional GbE Controller	Intel® i350: 2 RJ45 (1GbE)
OCP SSlot	1 OCP NIC 3.0 (PCIe5.0 x16)

• Server Management

BMC Controller	ASPEED AST2600
IPMI Dedicated GLAN	1 Realtek RTL8211F for dedicated management GLAN

• Graphics

Controller	ASPEED AST2600
VRAM	DDR4 512MB

• Front Panel

Buttons	Power button w/ LED, Reset button, NMI button, UID button
LEDs	System fault LED, HDD activity LED
I/O Ports	2 RJ45 (1GbE) by Intel i350, shares with Rear IO 1 dedicated IPMI, shares with Rear IO 4 Type-A (USB3.2 Gen1) 1 DB15 (VGA)

• Rear I/O

UID Button/LED	1 UID button w/ LED
VGA Port	1 DB15 (VGA)
USB 3.2 Gen1 Port	2 Type A (USB3.2 Gen1)
RJ45	4 RJ45 (1GbE), 1 dedicated IPMI

• System BIOS

BIOS Type	AMI UEFI BIOS; 256 Mb (32MB) SPI Flash ROM
BIOS Features	Instant Flash, ACPI 6.4 and about compliance wake up events, SMBIOS 3.5.0 and above, Plug and Play(PnP)

• Hardware Monitor

Temperature	CPU, MB, Card side Temperature Sensing
Fan	Fan Tachometer CPU Quiet Fan (Allow Chassis Fan Speed Auto-Adjust by CPU Temperature) Fan Multi-Speed Control P0_VDDCR_CPU0, P0_VDDCR_CPU1, P0_VDDCR_SOC, P0_VDD_18_DUAL, P0_VDD_11_S3, P0_VDDIO, P1_VDDCR_CPU0, P1_VDDCR_CPU1, P1_VDDCR_SOC, P1_VDD_18_DUAL, P1_VDD_11_S3, P1_VDDIO, +BAT, +12V, +3VSB, +5VSB
Voltage	

• System Fan

Fan	5 Middle Hot-swap 80x80 mm fans
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• Power Supply

Type	3+1 CRPS
Output Watts	1000W @ 100-127Vac input / 2000W @ 200-240Vac input
Efficiency	80-PLUS Platinum
AC Input	Low-line: 100-127Vrms, 47/63Hz ; High-line: 200-240Vrms, 47/63Hz

• Operating System

Microsoft Windows	Server 2022 (64-bit) Server 2025 (64-bit)
Linux	Red Hat Enterprise Linux Server 8.5 (64-bit) / 9.2 (64-bit) SUSE Enterprise Linux Server 15 SP3 (64-bit) / 15 SP5 (64-bit) Ubuntu 21.04 (64-bit) / 22.04.2 (64-bit)

• Operating Environment

Temperature	Operation temperature: 10°C ~ 35°C / Non-operation temperature: -40°C ~ 70°C
Humidity	Non-operation humidity: 20% ~ 90% (Non-condensing)